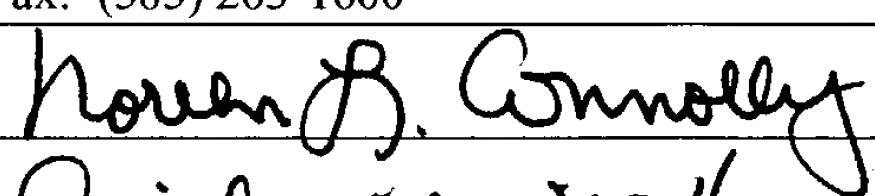
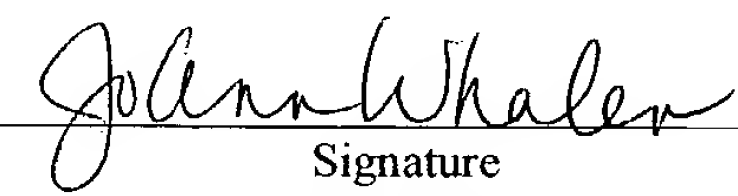
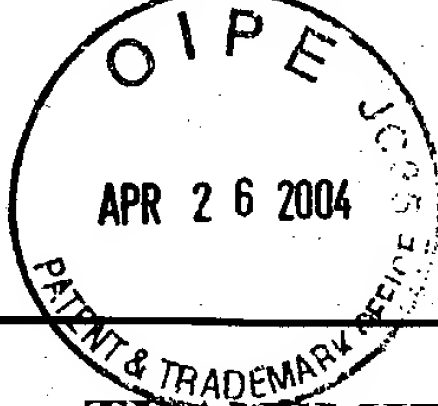


<b>TRANSMITTAL FORM</b> (to be used for all correspondence after initial filing)		Application Number	09/963,698
		Filing Date	September 26, 2001
		First Named Inventor	Francis Barany
		Group Art Unit	1639
		Examiner Name	P. Ponnaluri
Total Number of Pages in This Submission	8 & cited references	Attorney Docket Number	19603/3355 (CRF D-1595E)

ENCLOSURES (check all that apply)		
<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input checked="" type="checkbox"/> Supplemental Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> A copy of the Notice to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Declaration and Power of Attorney <input type="checkbox"/> Licensing-related Papers <input type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Application Data Sheet <input type="checkbox"/> Request for Corrected Filing Receipt with Enclosures <input checked="" type="checkbox"/> A self-addressed, prepaid postcard for acknowledging receipt <input checked="" type="checkbox"/> Other Enclosure(s) (please identify below): PTO-1449 (4 pages) (in duplicate) 4 cited references
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Firm or Individual name	Noreen L. Connolly, Esq. Nixon Peabody LLP Clinton Square, P.O. Box 31051 Rochester, New York 14603-1051 Telephone: (585) 263-1597 Fax: (585) 263-1600
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	Application Number	09/963,698	
	Filing Date	September 26, 2001	
	First Named Inventor	Francis Barany	
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Firm or Individual name	Noreen L. Connolly, Esq. Nixon Peabody LLP Clinton Square, P.O. Box 31051 Rochester, New York 14603-1051 Telephone: (585) 263-1597 Fax: (585) 263-1600
Signature	<i>Noreen L. Connolly</i> Registration No. 48,987
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PATENT  
Docket No.: 19603/3355 (CRF D-1595E)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants	:	Barany et al.	)	Examiner:
			)	P. Ponnaluri
Serial No.	:	09/963,698	)	
			)	Art Unit:
Cnfrm. No.	:	2018	)	1639
			)	
Filed	:	September 26, 2001	)	
			)	
For	:	DETECTION OF NUCLEIC ACID SEQUENCE	)	
		DIFFERENCES USING THE LIGASE	)	
		DETECTION REACTION WITH	)	
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SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT  
UNDER 37 CFR §§ 1.97-1.98

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Pursuant to 37 CFR §§ 1.97-1.98, applicants hereby bring to the attention of the United States Patent and Trademark Office, the enclosed references listed on the attached PTO-1449 form.

Pursuant to 37 CFR § 1.98(d), the references 1-5 and 9-40 identified on the attached PTO-1449 form are not provided, because these references either were previously cited by or submitted to the PTO in the above referenced application or in the parent U.S. Patent Application Serial No. 08/794,851, filed February 4, 1997, of which this application claims priority under 35 U.S.C. § 120.

04/28/2004 FMETEKI1 00000063 09963698

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180.00 0P

Pursuant to 37 CFR § 1.17(p) and 37 CFR § 1.97(c), applicants hereby enclose a check in the amount of \$180.00. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 14-1138.

Respectfully submitted,

Date: April 20, 2004

Noreen L. Connolly

Noreen L. Connolly  
Registration No. 48,987

NIXON PEABODY LLP  
Clinton Square, P.O. Box 31051  
Rochester, New York 14603-1051  
Telephone: (585) 263-1597  
Facsimile: (585) 263-1600

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PTO/SB/08A (10-01)

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				Application Number	09/963,698
				Filing Date	September 26, 2001
				First Named Inventor	Barany et al.
				Art Unit	1639
				Examiner Name	P. Ponnaluri
Sheet	1	of	4	Attorney Docket Number	19603/3355 (CRF D-1595E)

U.S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. <sup>1</sup>	U.S. Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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	1	US-4,988,617	01/29/1991	Landegren et al.	
	2	US-5,516,635	02/16/1996	Ekins et al.	
	3	US-5,858,659	01/12/1999	Sapolsky et al.	
	4	US-6,143,495	11/07/2000	Lizardi et al.	
	5	US-6,506,594 B1	01/14/2003	Barany et al.	
	6	US-5,837,832	11/17/1998	Chee et al.	
	7	US-5,594,121	01/14/1997	Froehler	
	8	US-5,723,320	03/03/1998	Dehlinger	
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FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>2</sup> (if known)				
	9	WO 92/10566	06/25/1992	WIPO		
	10	WO 98/03673 A	01/29/1998	WIPO		
	11	WO 00/56927 A3	09/28/2000	WIPO		

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				Filing Date	September 26, 2001
				First Named Inventor	Barany et al.
				Group Art Unit	1639
				Examiner Name	P. Ponnaluri
Sheet	2	of	4	Attorney Docket Number	19603/3355 (CRF D-1595E)

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	12	Belgrader et al., "A Multiplex PCR-Ligase Detection Reaction Assay for Human Identity Testing," <u>Genome Science &amp; Tech.</u> 1:77-87 (1996)	
	13	Chee et al., "Accessing Genetic Information with High-Density DNA Arrays," <u>Science</u> 274:610-614 (1996)	
	14	Day et al., "Identification of Non-Amplifying CYP21 Genes When Using PCR-Based Diagnosis of 21-Hydroxylase Deficiency in Congenital Adrenal Hyperplasia (CAH) Affected Pedigrees," <u>Hum. Mol. Genet.</u> 5(12):2039-2048 (1996)	
	15	Drobyshev et al., "Sequence Analysis by Hybridization with Oligonucleotide Microchip: Identification of $\beta$ -Thalassemia Mutations," <u>Gene</u> 188:45-52 (1997)	
	16	Fodor et al., "Multiplexed Biochemical Assays with Biological Chips," <u>Nature</u> 364:555-556 (1993)	
	17	Gerry et al., "Universal DNA Microarray Method for Multiplex Detection of Low Abundance Point Mutations," <u>J. Mol. Biol.</u> 292:251-262 (1999)	
	18	Hacia et al., "Detection of Heterozygous Mutations in <i>BRCA1</i> Using High Density Oligonucleotide Arrays and Two-Colour Fluorescence Analysis," <u>Nat. Genet.</u> 14:441-447 (1996)	
	19	Heller et al., "Discovery and Analysis of Inflammatory Disease-Related Genes Using cDNA Microarrays," <u>Proc. Nat'l. Acad. Sci. USA</u> 94:2150-2155 (1997)	
	20	Khanna et al., "Multiplex PCR/LDR for Detection of K-ras Mutations in Primary Colon Tumors," <u>Oncogene</u> 18:27-38 (1999)	
	21	Khrapko et al., "A Method for DNA Sequencing by Hybridization with Oligonucleotide Matrix," <u>J. DNA Seq. Map.</u> 1:375-388 (1991)	
	22	Kozal et al., "Extensive Polymorphisms Observed in HIV-1 Clade B Protease Gene Using High-Density Oligonucleotide Arrays," <u>Nature Medicine</u> 2:753-759 (1996)	

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<b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b> <i>(use as many sheets as necessary)</i>				Application Number	09/963,698
				Filing Date	September 26, 2001
				First Named Inventor	Barany et al.
				Group Art Unit	1639
				Examiner Name	P. Ponnaluri
Sheet	3	of	4	Attorney Docket Number	19603/3355 (CRF D-1595E)

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	23	R.J. Lipshutz et al., "Using Oligonucleotide Probe Arrays To Assess Genetic Diversity," <u>Biotechniques</u> 19:442-447 (1995)	
	24	Lysov et al., "DNA Sequencing by Hybridization to Oligonucleotide Matrix. Calculation of Continuous Stacking Hybridization Efficiency," <u>Journal of Biomolecular Structure &amp; Dynamics</u> 11(4):797-812 (1994)	
	25	Maskos et al., "A Study of Oligonucleotide Reassociation Using Large Arrays of Oligonucleotides Synthesised on a Glass Support," <u>Nucleic Acids Res.</u> 21:4663-4669 (1993)	
	26	Maskos et al., "A Novel Method for the Analysis of Multiple Sequence Variants by Hybridization to Oligonucleotides," <u>Nucleic Acids Res.</u> 21:2267-2268 (1993)	
	27	Nikiforov et al., "Genetic Bit Analysis: A Solid Phase Method for Typing Single Nucleotide Polymorphisms," <u>Nucleic Acids Res.</u> 22(20):4167-4175 (1994)	
	28	Nonradioactive <i>in situ</i> Hybridization Manual from Boehringer Mannheim Biochemicals, page 1, 1992	
	29	Nucleic Acid Hybridization, A Practical Approach, page 6, edited by Hames & Higgins, 1985, Published by IRL Press Limited, P.O. Box 1, Eynsham, Oxford OX 8 1JJ, England.	
	30	Parinov et al., "DNA Sequencing by Hybridization to Microchip Octa- and Decanucleotides Extended by Stacked Pentanucleotides," <u>Nucleic Acids Res.</u> 24:2998-3004 (1996)	
	31	Reed et al., "Chromosome-Specific Microsatellite Sets for Fluorescence-Based, Semi-Automated Genome Mapping," <u>Nature Genetics</u> 7:390-395 (1994)	
	32	Schena et al., "Parallel Human Genome Analysis: Microarray-Based Expression Monitoring of 1000 Genes," <u>Proc. Natl. Acad. Sci. USA</u> 93:10614-10619 (1996)	
	33	Shalon et al., "A DNA Microarray System for Analyzing Complex DNA Samples Using Two-Color Fluorescent Probe Hybridization," <u>Genome Res.</u> 6:639-645 (1996)	

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				Application Number	09/963,698
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				Examiner Name	P. Ponnaluri
Sheet	4	of	4	Attorney Docket Number	19603/3355 (CRF D-1595E)

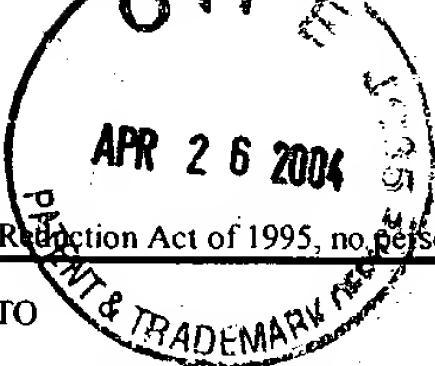
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	34	Southern et al., "Analyzing and Comparing Nucleic Acid Sequences by Hybridization to Arrays of Oligonucleotides: Evaluation using Experimental Models," <u>Genomics</u> 13:1008-1017 (1992)	
	35	Timofeev et al., "Regioselective Immobilization of Short Oligonucleotides to Acrylic Copolymer Gels," <u>Nucleic Acids Res.</u> 24:3142-3148 (1996)	
	36	Tong et al., "Biochemical Properties of a High Fidelity DNA Ligase from <i>Thermus</i> species AK16D," <u>Nucleic Acids Research</u> 27(3):788-794 (1999)	
	37	Van Ness et al., "A Versatile Solid Support System for Oligodeoxynucleotide Probe-based Hybridization Assays," <u>Nucleic Acids Res.</u> 19:3345-3350 (1991)	
	38	Weber et al., "Abundant Class of Human DNA Polymorphisms Which Can Be Typed Using the Polymerase Chain Reaction,"	
	39	Yershov et al., "DNA Analysis and Diagnostics on Oligonucleotide Microchips," <u>Proc. Natl. Acad. Sci. USA</u> 93:4913-4918 (1996)	
	40	Zhang et al., "Single-base Mutational Analysis of Cancer and Genetic Diseases Using Membrane Bound Modified Oligonucleotides," <u>Nucleic Acids Res.</u> 19:3929-3933 (1991)	
	41	Janssen et al., "Evaluation of the DNA Fingerprinting Method AFLP as a New Tool in Bacterial Taxonomy," <u>Microbiology</u> 142:1881-1893 (1996)	

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				Application Number	09/963,698
				Filing Date	September 26, 2001
				First Named Inventor	Barany et al.
				Art Unit	1639
				Examiner Name	P. Ponnaluri
Sheet	1	of	4	Attorney Docket Number	19603/3355 (CRF D-1595E)

U.S. PATENT DOCUMENTS					
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	4	US-6,143,495	11/07/2000	Lizardi et al.	
	5	US-6,506,594 B1	01/14/2003	Barany et al.	
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FOREIGN PATENT DOCUMENTS						
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		Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)				
	9	WO 92/10566	06/25/1992	WIPO		
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Sheet	2	of	4	Attorney Docket Number	19603/3355 (CRF D-1595E)

OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS			
Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	12	Belgrader et al., "A Multiplex PCR-Ligase Detection Reaction Assay for Human Identity Testing," <u>Genome Science &amp; Tech.</u> 1:77-87 (1996)	
	13	Chee et al., "Accessing Genetic Information with High-Density DNA Arrays," <u>Science</u> 274:610-614 (1996)	
	14	Day et al., "Identification of Non-Amplifying CYP21 Genes When Using PCR-Based Diagnosis of 21-Hydroxylase Deficiency in Congenital Adrenal Hyperplasia (CAH) Affected Pedigrees," <u>Hum. Mol. Genet.</u> 5(12):2039-2048 (1996)	
	15	Drobyshev et al., "Sequence Analysis by Hybridization with Oligonucleotide Microchip: Identification of $\beta$ -Thalassemia Mutations," <u>Gene</u> 188:45-52 (1997)	
	16	Fodor et al., "Multiplexed Biochemical Assays with Biological Chips," <u>Nature</u> 364:555-556 (1993)	
	17	Gerry et al., "Universal DNA Microarray Method for Multiplex Detection of Low Abundance Point Mutations," <u>J. Mol. Biol.</u> 292:251-262 (1999)	
	18	Hacia et al., "Detection of Heterozygous Mutations in <i>BRCA1</i> Using High Density Oligonucleotide Arrays and Two-Colour Fluorescence Analysis," <u>Nat. Genet.</u> 14:441-447 (1996)	
	19	Heller et al., "Discovery and Analysis of Inflammatory Disease-Related Genes Using cDNA Microarrays," <u>Proc. Nat'l. Acad. Sci. USA</u> 94:2150-2155 (1997)	
	20	Khanna et al., "Multiplex PCR/LDR for Detection of K-ras Mutations in Primary Colon Tumors," <u>Oncogene</u> 18:27-38 (1999)	
	21	Khrapko et al., "A Method for DNA Sequencing by Hybridization with Oligonucleotide Matrix," <u>J. DNA Seq. Map.</u> 1:375-388 (1991)	
	22	Kozal et al., "Extensive Polymorphisms Observed in HIV-1 Clade B Protease Gene Using High-Density Oligonucleotide Arrays," <u>Nature Medicine</u> 2:753-759 (1996)	

Examiner Signature		Date Considered	
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<sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> Applicant is to place a check mark here if English language Translation is attached.

APR 26 2004

PTO/SB/08B (10-01)

Approved for use through 10/31/2002. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

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Substitute for form 1449B/PTO

**INFORMATION DISCLOSURE  
STATEMENT BY APPLICANT**

(use as many sheets as necessary)

**Complete if Known**

Application Number	09/963,698
Filing Date	September 26, 2001
First Named Inventor	Barany et al.
Group Art Unit	1639
Examiner Name	P. Ponnaluri
Attorney Docket Number	19603/3355 (CRF D-1595E)

Sheet 3 of 4

**OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T <sup>2</sup>
	23	R.J. Lipshutz et al., "Using Oligonucleotide Probe Arrays To Assess Genetic Diversity," <u>Biotechniques</u> 19:442-447 (1995)	
	24	Lysov et al., "DNA Sequencing by Hybridization to Oligonucleotide Matrix. Calculation of Continuous Stacking Hybridization Efficiency," <u>Journal of Biomolecular Structure &amp; Dynamics</u> 11(4):797-812 (1994)	
	25	Maskos et al., "A Study of Oligonucleotide Reassociation Using Large Arrays of Oligonucleotides Synthesised on a Glass Support," <u>Nucleic Acids Res.</u> 21:4663-4669 (1993)	
	26	Maskos et al., "A Novel Method for the Analysis of Multiple Sequence Variants by Hybridization to Oligonucleotides," <u>Nucleic Acids Res.</u> 21:2267-2268 (1993)	
	27	Nikiforov et al., "Genetic Bit Analysis: A Solid Phase Method for Typing Single Nucleotide Polymorphisms," <u>Nucleic Acids Res.</u> 22(20):4167-4175 (1994)	
	28	Nonradioactive <i>in situ</i> Hybridization Manual from Boehringer Mannheim Biochemicals, page 1, 1992	
	29	Nucleic Acid Hybridization, A Practical Approach, page 6, edited by Hames & Higgins, 1985, Published by IRL Press Limited, P.O. Box 1, Eynsham, Oxford OX 8 1JJ, England.	
	30	Parinov et al., "DNA Sequencing by Hybridization to Microchip Octa- and Decanucleotides Extended by Stacked Pentanucleotides," <u>Nucleic Acids Res.</u> 24:2998-3004 (1996)	
	31	Reed et al., "Chromosome-Specific Microsatellite Sets for Fluorescence-Based, Semi-Automated Genome Mapping," <u>Nature Genetics</u> 7:390-395 (1994)	
	32	Schena et al., "Parallel Human Genome Analysis: Microarray-Based Expression Monitoring of 1000 Genes," <u>Proc. Natl. Acad. Sci. USA</u> 93:10614-10619 (1996)	
	33	Shalon et al., "A DNA Microarray System for Analyzing Complex DNA Samples Using Two-Color Fluorescent Probe Hybridization," <u>Genome Res.</u> 6:639-645 (1996)	

Examiner  
SignatureDate  
Considered

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APR 26 2004

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<b>Substitute for form 1449B/PTO</b>  <b>INFORMATION DISCLOSURE STATEMENT BY APPLICANT</b>  (use as many sheets as necessary)				<b>Complete if Known</b>	
				Application Number	09/963,698
				Filing Date	September 26, 2001
				First Named Inventor	Barany et al.
				Group Art Unit	1639
				Examiner Name	P. Ponnaluri
Sheet	4	of	4	Attorney Docket Number	19603/3355 (CRF D-1595E)

**OTHER PRIOR ART – NON PATENT LITERATURE DOCUMENTS**

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	34	Southern et al., "Analyzing and Comparing Nucleic Acid Sequences by Hybridization to Arrays of Oligonucleotides: Evaluation using Experimental Models," <u>Genomics</u> 13:1008-1017 (1992)	
	35	Timofeev et al., "Regioselective Immobilization of Short Oligonucleotides to Acrylic Copolymer Gels," <u>Nucleic Acids Res.</u> 24:3142-3148 (1996)	
	36	Tong et al., "Biochemical Properties of a High Fidelity DNA Ligase from <i>Thermus</i> species AK16D," <u>Nucleic Acids Research</u> 27(3):788-794 (1999)	
	37	Van Ness et al., "A Versatile Solid Support System for Oligodeoxynucleotide Probe-based Hybridization Assays," <u>Nucleic Acids Res.</u> 19:3345-3350 (1991)	
	38	Weber et al., "Abundant Class of Human DNA Polymorphisms Which Can Be Typed Using the Polymerase Chain Reaction,"	
	39	Yershov et al., "DNA Analysis and Diagnostics on Oligonucleotide Microchips," <u>Proc. Natl. Acad. Sci. USA</u> 93:4913-4918 (1996)	
	40	Zhang et al., "Single-base Mutational Analysis of Cancer and Genetic Diseases Using Membrane Bound Modified Oligonucleotides," <u>Nucleic Acids Res.</u> 19:3929-3933 (1991)	
	41	Janssen et al., "Evaluation of the DNA Fingerprinting Method AFLP as a New Tool in Bacterial Taxonomy," <u>Microbiology</u> 142:1881-1893 (1996)	

Examiner Signature		Date Considered	
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## FEE TRANSMITTAL

FOR FY 2004 APR 26 2004

Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT

(\$)

180

TRADEMARK

Complete if Known

Application Number

09/963,698

Filing Date

September 26, 2001

First Named Inventor

Francis Barany

Examiner Name

P. Ponnaluri

Art Unit

1639

Attorney Docket No.

19603/3355 (CRF D-1595E)

## METHOD OF PAYMENT (check all that apply)

☒ Check ☐ Credit Card ☐ Money Order ☐ Other ☐ None☐ Deposit Account:

Deposit Account Number

14-1138

Deposit Account Name

Nixon Peabody LLP

The Commissioner is authorized to: (check all that apply)

☐ Charge fee(s) indicated below ☒ Credit any overpayments☒ Charge any additional fee(s)☐ Charge fee(s) indicated below, except for the filing fee to the above-identified deposit account.

## FEE CALCULATION

## 1. BASIC FILING FEE

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description	Fee Paid
1001	770	2001	385	Utility filing fee	
1002	340	2002	170	Design filing fee	
1003	530	2003	265	Plant filing fee	
1004	770	2004	385	Reissue filing fee	
1005	160	2005	80	Provisional filing fee	

SUBTOTAL (1) (\$)

0

## 2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

Total Claims	Extra Claims	Fee from below	Fee Paid
	-20** =	X	= 0
Independent Claims	-3** =	X	= 0
Multiple Dependent	X	=	= 0

Large Entity Fee Code	Large Entity Fee (\$)	Small Entity Fee Code	Small Entity Fee (\$)	Fee Description
1202	18	2202	9	Claims in excess of 20
1201	86	2201	43	Independent claims in excess of 3
1203	290	2203	145	Multiple dependent claim, if not paid
1204	86	2204	43	** Reissue independent claims over original patent
1205	18	2205	9	** Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) (\$)

0

\*\*or number previously paid, if greater; For Reissues, see above

## FEE CALCULATION (continued)

## 3. ADDITIONAL FEES

Large Entity

Small Entity

Fee Code	Fee (\$)	Fee Code	Fee (\$)	Fee Description
1051	130	2051	65	Surcharge - late filing fee or oath
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet
1053	130	1053	130	Non-English specification
1812	2,520	1812	2,520	For filing a request for <i>ex parte</i> reexamination
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action
1251	110	2251	55	Extension for reply within first month
1252	420	2252	210	Extension for reply within second month
1253	950	2253	475	Extension for reply within third month
1254	1,480	2254	740	Extension for reply within fourth month
1255	2,010	2255	1,005	Extension for reply within fifth month
1401	330	2401	165	Notice of Appeal
1402	330	2402	165	Filing a brief in support of an appeal
1403	290	2403	145	Request for oral hearing
1451	1,510	1451	1,510	Petition to institute a public use proceeding
1452	110	2452	55	Petition to revive - unavoidable
1453	1,330	2453	665	Petition to revive - unintentional
1501	1,330	2501	665	Utility issue fee (or reissue)
1502	480	2502	240	Design issue fee
1503	640	2503	320	Plant issue fee
1460	130	1460	130	Petitions to the Commissioner
1807	50	1807	50	Processing fee under 37 CFR 1.17(q)
1806	180	1806	180	Submission of Information Disclosure Stmt
8021	40	8021	40	Recording each patent assignment per property (times number of properties)
1809	770	2809	385	Filing a submission after final rejection (37 CFR 1.129(a))
1810	770	2810	385	For each additional invention to be examined (37 CFR 1.129(b))
1801	770	2801	385	Request for Continued Examination (RCE)
1802	900	1802	900	Request for expedited examination of a design application

Other fee (specify)

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3) (\$)

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April 21, 2004

Date

Jo Ann Whalen

Signature

Jo Ann Whalen

Typed or printed name

## SUBMITTED BY

Complete (if applicable)

Name (Print/Type)

Noreen L. Connolly

Registration No.  
(Attorney/Agent)

48,987

Telephone

(585) 263-1597

Signature

Noreen L. Connolly

Date

April 20, 2004

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# FEE TRANSMITTAL FOR FY 2004

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☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$180)

Complete if Known

Application Number 09/963,698  
Filing Date September 26, 2001  
First Named Inventor Francis Barany  
Examiner Name P. Ponnaluri  
Art Unit 1639  
Attorney Docket No. 19603/3355 (CRF D-1595E)

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☐ Deposit Account:

Deposit Account Number 14-1138

Deposit Account Name Nixon Peabody LLP

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Signature	Date	
Noreen L. Connolly	April 20, 2004	

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